

Amendments to the Specification

Please add the following new paragraphs after the paragraph ending on page 3, line 21 and before the “SUMMARY” heading:

Another aspect of this invention is the use of a coded microcarrier having immobilized on its surface a plurality of quenched, labeled signaling hairpin molecules each comprising an interacting affinity pair separated by a linking moiety, one member of the affinity pair having bound thereto at least one fluorophore and the other member of the affinity pair having bound thereto at least one quencher, wherein interaction of the affinity pair of each hairpin molecule is disruptable by a physical or chemical change in a condition of its environment, wherein the disruption of the interaction of at least one affinity pair occurs at a first level of said condition and the disruption of at least another affinity pair occurs at a second level of said condition, and where said disruptions are optically differentiable.

Another aspect of this invention is the use in a distributed microarray of a mixture of a plurality of coded microcarriers according to the preceding paragraph, wherein the individual microcarriers each have immobilized thereon a capture probe and wherein the coding scheme for identifying individual microcarriers in said mixture comprises a combination of from three to eight spectrally differentiable fluorophores and at least three affinity pairs disruptable at detectably different levels of said condition, optionally where there is a plurality of identically coded microcarriers having immobilized thereon the same capture probe, and optionally wherein the capture probes are molecular beacon probes.